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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,912	07/31/2001	Masayuki Kojima	503.28546CV9	1412

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ANTONELLI TERRY STOUT AND KRAUS
SUITE 1800
1300 NORTH SEVENTEENTH STREET
ARLINGTON, VA 22209

EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 05/05/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/917,912

Applicant(s)

KOJIMA ET AL.

Examiner

Martin J Angebranndt

Art Unit

1756

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 April 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 07 March 2003. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☒ they raise the issue of new matter (see Note below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:


Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 8-17, 27 and 66.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____


Martin J Angebranndt
Primary Examiner
Art Unit: 1756

Continuation of 2. NOTE: The additional recitations of an RF bias applied to the sample during the etch and the limitation of the process to occurring in a single apparatus were not present in the claims under prosecution and would require further consideration. The location of the corrosive residues is also newly recited.

Continuation of 5. does NOT place the application in condition for allowance because: The examiner disagrees noting that the issue of minimization of exposure to the atmosphere and the removal of any corrosive residues is well established in the art applied in the rejection. There is nothing new there. While the claims differ slightly from those reviewed by the board of appeals in the parent application, 08/470443, the board supported the examiner's position. The use of heated nitrogen to dry the wafers clearly implies that the nitrogen is dry and that moisture is limited. The transfer between chambers under vacuum or in an inert atmosphere is also clearly taught and understood to exclude moisture. The issues of RF biasing and a single apparatus are moot as these are not limitations in the active claims. (the entry of the amendments including these was denied). With respect to the arguments that the specification provides data concerning unexpected results, this is an unsupported statement and the specification on page 50 at lines 9-13 clearly indicates that laminate and alloy (single layer) wiring both suffer from the same problems. The examiner notes that the problem is one recognized in the art as relating to aluminum and all that differs is the severity of the problem when other metals are present. Therefore the problem and its solution are both fully recognized in the art. The basis for the rejection is provided in the closing paragraph of page 3. In the header, the phrase "as applied to claims cited above, and further" is superfluous, but hardly misleading. The applicant misunderstands how the resist functions. It is coated on the surface of the wiring (laminate) and when developed, portions of the resist are removed. Therefore the sidewalls are not in contact with the resist as it is applied prior to the etching which exposes the sidewalls. The etchant is able to etch any underlying materials through these openings. The resist is the only element of the claim, which might be construed as a protective layer and its function is well understood as preventing areas of the underlying substrate from being etched. The applicant should understand that the resist is a single layer and there is no other "protective layer" provided on it. The applicant might review Elliott's figures 2-25 and 2-26, which show the developed resist on top of the aluminum and the subsequent transfer of the resist pattern into the aluminum film by etching. This is clearly a patterned etch rather than the "blanket etch" argued by the applicant. The issue of Hoch as argued by the applicant is moot as the proposed claims have not been entered.

Wt
5/1/03